

DOCKET NO: 289246US0PCT

IN THE UNITED STATES PATENT & TRADEMARK OFFICE

IN RE APPLICATION OF :
MARKUS KLUMPE, ET AL. : EXAMINER: KEYS, ROSALYND ANN
SERIAL NO: 10/575,760 :
FILED: APRIL 13, 2006 : GROUP ART UNIT: 1621
FOR: C10 ALKANOLALKOXYLATE :
MIXTURES AND USE THEREOF AS
NOVEL LOW-FOAMING WETTING
AGENTS

REPLY BRIEF

COMMISSIONER FOR PATENTS
ALEXANDRIA, VIRGINIA 22313

SIR:

This is a Reply Brief in response to the Examiner's Answer dated December 9, 2010.

VII. ARGUMENT

Rejection of Claims 1 and 5-10 under 35 U.S.C. § 103(a), over Dahlgren et al. (WO 94/11331)('331) in view of Dahlgren et al. (WO 94/11330)('330) and further in view of Clement et al. (WO 01/04183 A1).

The Examiner continues to assert that the 2-propyl heptanol described in both Dahlgren references as a Guebert (i.e., Guerbet) alcohol would be understood by one of ordinary skill in the art as a mixture of isomers, in spite of Appellants' showing of the meaning of the Guerbet description. The Examiner apparently ignores the significance of the "Name Reaction" described and provides other references not employing the Guerbet reaction as showing the chemistry according to Dahlgren.

Applicants submit that one of ordinary skill in the art of organic chemistry understands the significance and utility of "Name Reactions" and notes that The Merck Index includes a chapter compiling known name reactions. A copy of the description of the Guerbet Reaction is attached and as Appellants previously noted, the description shows that an isomeric mixture is not obtained. Appellants submit that by describing 2-propyl heptanol as a Guerbet alcohol, Dahlgren was notifying one of ordinary skill of the structure of the alcohol as 2-propyl heptanol, not a mixture, as the Office erroneously alleges.

The Examiner has pointed to the Technical Data Sheet provided by BASF for the product described as Propylheptanol. As indicated in the description, this commercial product is a mixture of 2-Propylheptanol, 4-Methylpropylhexanol and 5-Methylpropylhexanol. Appellants note that 2-Propylheptanol is described according to CAS 10042-59-8 and is a compound of a specific chemical structure, not a mixture. Appellants again submit that Dahlgren as one skilled in the art describes 2-propyl heptanol specifically and thus also indicates a compound of a single chemical formula.

The Examiner has again cited U.S. 4,969,953 (Miyazawa), U.S. 5,434,313 (Harrison) and 7,173,138 (Ahlers) as showing preparation of a propyl heptanol isomer mixture which the Examiner alleges demonstrates the mixture employed by Dahlgren. However, Appellants submit that such assertion ignores the description of Dahlgren as described above. Appellants further point out that each of Miyazawa, Harrison and Ahlers employs a mixture of aldehydes as starting product and therefore, a mixture of isomer products are obtained. For example, see Miyazawa, Col. 4, lines 29-49; Ahlers, Col. 4, lines 33-40, Col. 36, 14-20; and Harrison, Col. 5, lines 4-28. This is not the case with Dahlgren which describes Guerbet chemistry and thus is based on a specific alcohol starting product which converts to a specific aldehyde and after Aldol condensation and reduction yields a single isomer alcohol.

Appellants submit that the Examiner cannot ignore the description of both Dahlgren references and should acknowledge the chemical significance that is placed on the description Guerbet alcohol as described above.

Therefore, for all the reasons listed in the Appeal Brief filed October 8, 2010, and in view of the foregoing, it is respectfully requested that this rejection be reversed.

Claim 2

Appellants have noted that Claim 2 further describes that the C_3H_7 is n- C_3H_7 thus indicating a straight chain normal propyl structure. The specific isomer mixture recited in Claim 1 is not disclosed or suggested by the cited references. As the Office acknowledges (Examiner's Answer, dated December 9, page 7, lines 17-18), Dahlgren does not describe the structure of the C_3H_7 group and therefore relative to the description of Claim 2, the cited reference does not describe the isomer mixture according to Claim 1 and does not describe the three carbon chain as the straight chain form.

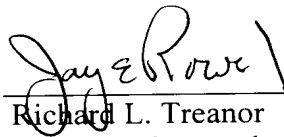
Therefore, for all the reasons listed in the Appeal Brief filed October 8, 2010, and in view of the foregoing, it is respectfully requested that this rejection be reversed.

CONCLUSION

Moreover, for all the reasons previously presented and presented above, it is respectfully requested that all rejections pending in the Final Office Action be reversed.

Respectfully submitted,

OBLON, SPIVAK, McCLELLAND,
MAIER & NEUSTADT, L.L.P.

A handwritten signature in dark ink, appearing to read "Jay E. Rowe", is written over a horizontal line.

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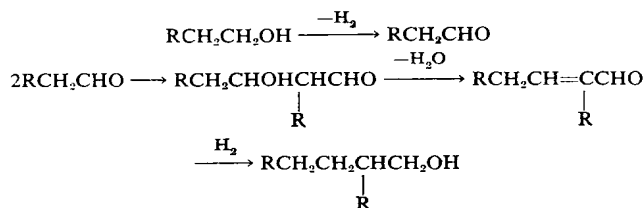
Organic Name Reactions

I. Guareschi, *Mem. Reale Accad. Sci. Torino* **II**, 55, 287 (1905); J. F. Thorpe *et al.*, *J. Chem. Soc.* **99**, 422 (1911); **115**, 686 (1919); **117**, 1465 (1920); **121**, 1765, 1821 (1922); **127**, 2358 (1925); C. Hollins, *The Synthesis of Nitrogen Ring Compounds*, p 197 (New York, 1924); N. L. Phalnikar and K. S. Nargund, *J. Univ. Bombay* **6/II**, 102 (1937); V. Migridichian, *The Chemistry of Organic Cyanogen Compounds*, p 322 (New York, 1947); H. S. Mosher in R. C. Elderfield, *Heterocyclic Compounds* **1**, p 466 (New York, 1950); S. M. McElvain and R. E. Lyle, *J. Am. Chem. Soc.* **72**, 384 (1950); E. H. Rodd, *Chemistry of Carbon Compounds IVA*, p 496 (New York, 1957); R. Lukes and J. Kuthman, *Collection Czechoslov. Chem. Commun.* **25**, 2173 (1960).
Cf. Claisen Condensation, Gatterman-Skita Synthesis, Hantzsch Pyridine Synthesis, Knoevenagel-Fries Modification, Thorpe Reactions, Ziegler Method.

Guerbet Reaction.

M. Guerbert, *Compt. Rend.* **128**, 511 (1899).

Condensation of alcohols at high temperature and pressure in the presence of sodium alkoxide or copper by a dehydrogenation, aldol condensation, and hydrogenation sequence:



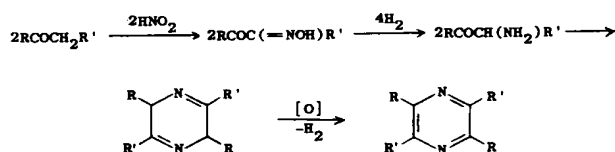
H. Machemer, *Angew. Chem.* **64**, 213 (1952); S. Veibel, J. T. Nielsen, *Tetrahedron* **23**, 1723 (1967); G. Gregorio *et al.*, *J. Organometal. Chem.* **37**, 385 (1972); E. Klein *et al.*, *Ann.* **1973**, 1004.
Cf. Lebedev Process, Ostromyslenskii Reaction.

Gustavson Reaction *see* Freund Reaction.

Gutknecht Pyrazine Synthesis.

H. Gutknecht, *Ber.* **12**, 2290 (1879); **13**, 1116 (1880).

Pyrazine cyclization of α -amino ketones produced by reduction of isonitroso ketones obtained by treatment of the active methylene group of a ketone with nitrous acid; the dihydropyrazines formed are dehydrogenated with Hg_2O or CuSO_4 , or sometimes with atmospheric oxygen:



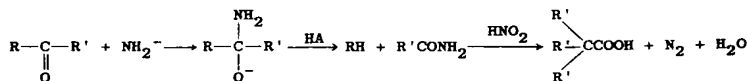
F. P. Treadwell, *Ber.* **14**, 1461, 2158 (1881); S. Gabriel, *Ber.* **41**, 1127 (1908); I. J. Krems and P. E. Spoerri, *Chem. Revs.* **44**, 291 (1947); R. C. Elderfield, *Heterocyclic Compounds* **6**, p 379, 385 (New York, 1957); E. H. Rodd, *Chemistry of Carbon Compounds IVB*, p 1319 (1959).

Cf. Gastaldi Synthesis, Stadel-Rügheimer Pyrazine Synthesis.

Haller-Bauer Reaction.

A. Haller, E. Bauer, *Compt. Rend.* **148**, 70, 127 (1909); **149**, 5 (1909).

Cleavage of non-enolizable ketones with sodium amide, most often applied to ketones ArCOCR_3 to yield trisubstituted acetic acids:



K. E. Hamlin, A. W. Weston, *Organic Reactions* **9**, 1 (1957); F. J. Impastato, H. M. Walborsky, *J. Am. Chem. Soc.* **84**, 1838 (1962); C. L. Bumgardner, K. G. McDaniel, *ibid.* **91**, 6281 (1969); Ch. Warner, *Diss. Abstr. Int. B* **32**, 5119 (1972).

Iodoform Reaction *see* Lieben Iodoform Reaction.

Hammick Reaction.

P. Dyson, D. L. Hammick, *J. Chem. Soc.* **1937**, 1724.

Decarboxylation of α -picolinic or related acids in the presence of carbonyl compounds accompanied by the formation of a new carbon-carbon bond:

